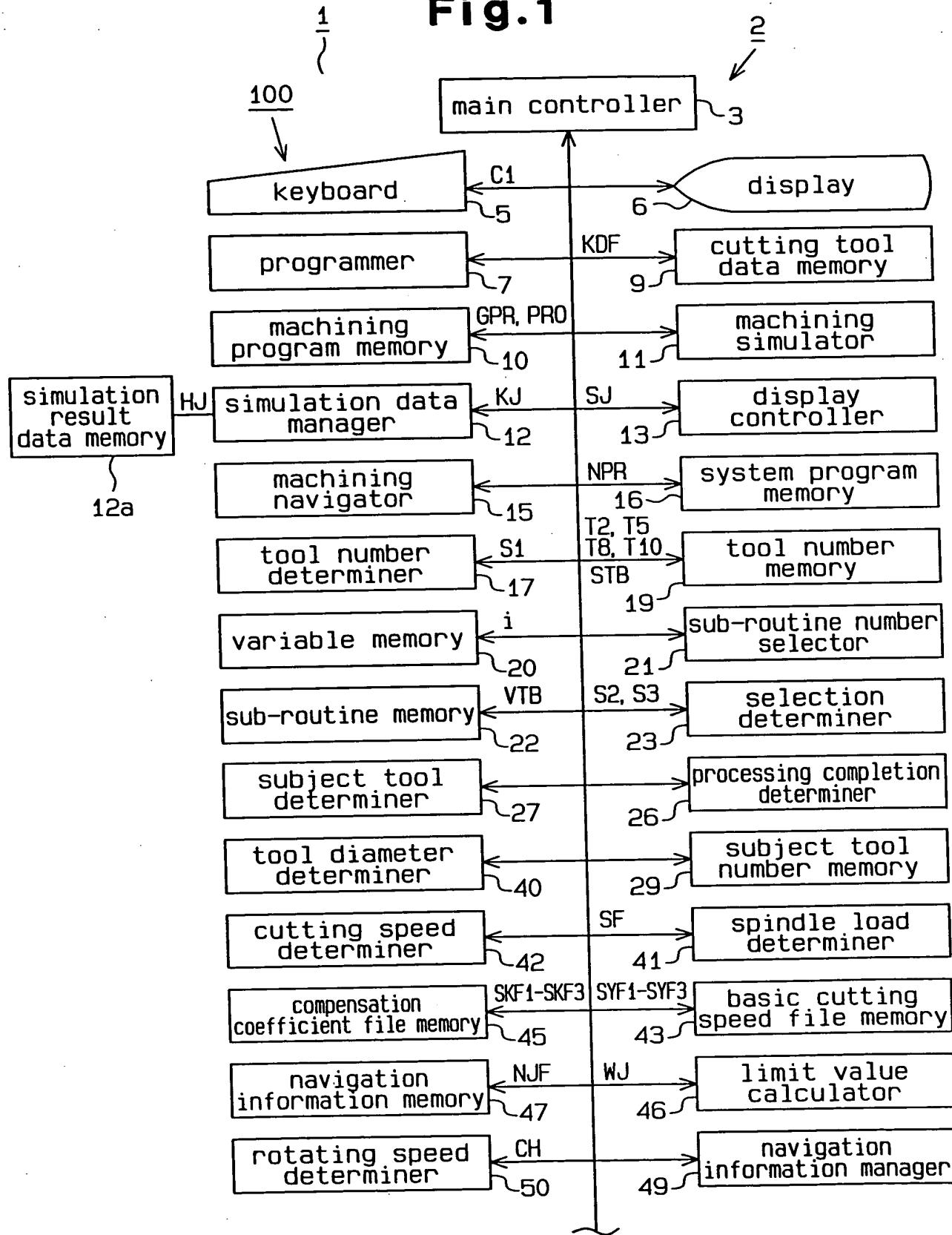


Fig.1



APPROVED BY DRAFTSMAN	O.G. FIG.
	CLASS SUBCLASS

Fig.2(a)

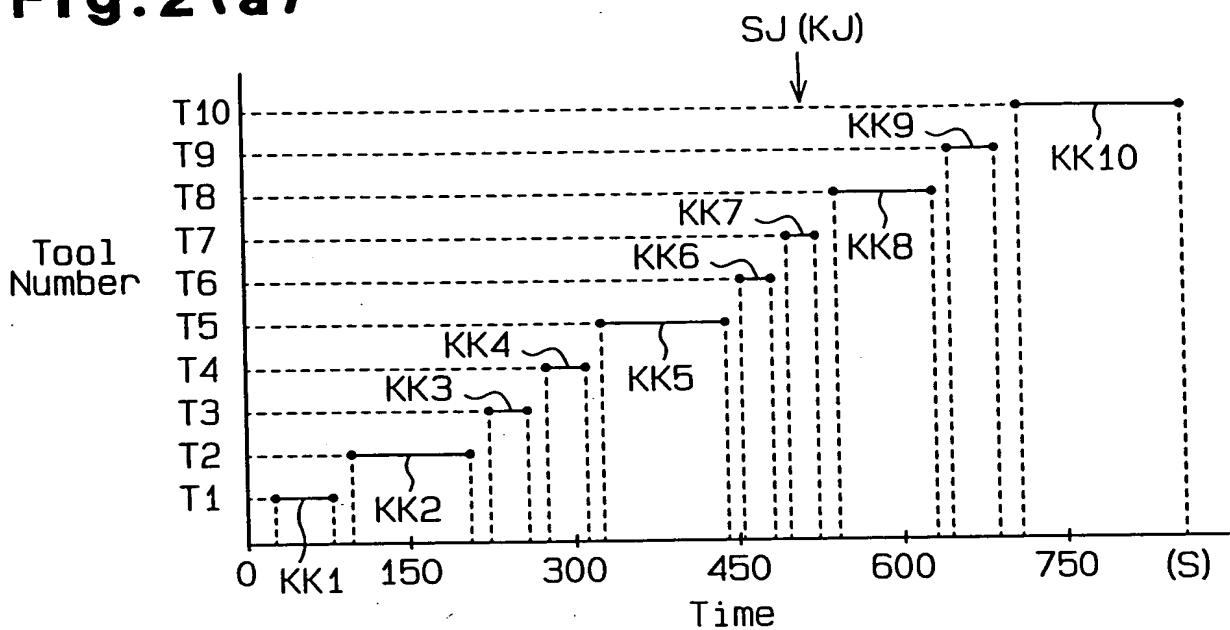


Fig.2(b)

STB

}

Ordinal Number (i)	1	2	3	4
Tool Number	T2	T5	T8	T10

Fig.2(c)

VTB

}

Tool Type	Drill	End Mill (Roughing)	Face Mill (Roughing)	End Mill (Finishing)	Face Mill (Finishing)
Sub-Routine Number	61	62	63	64	64

Fig.2(d)

HJ (KJ)

}

Tool Number	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
Maximum Spindle Load (%)	72	60	54	57	81	73	45	67	39	58
Cutting Speed (m/min)	45.9	40.8	124.0	87.5	100.4	72.1	53.4	110.9	120.0	80.0
Rotating Speed (min ⁻¹)	185	163	496	350	401	288	213	662	480	320

APPROVED	O.G. FIG.	
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Fig. 3

NPR

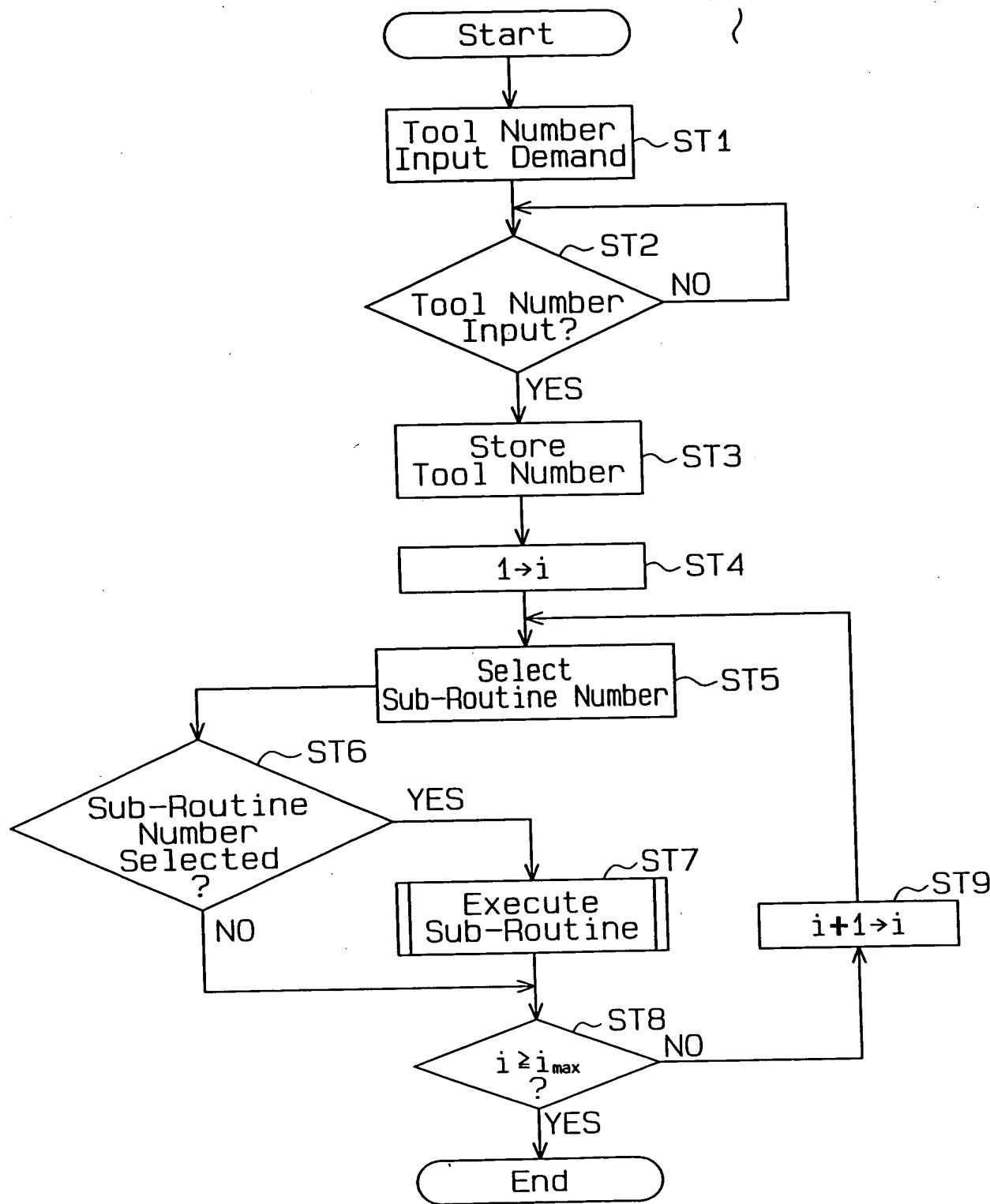


Fig.4

SR61

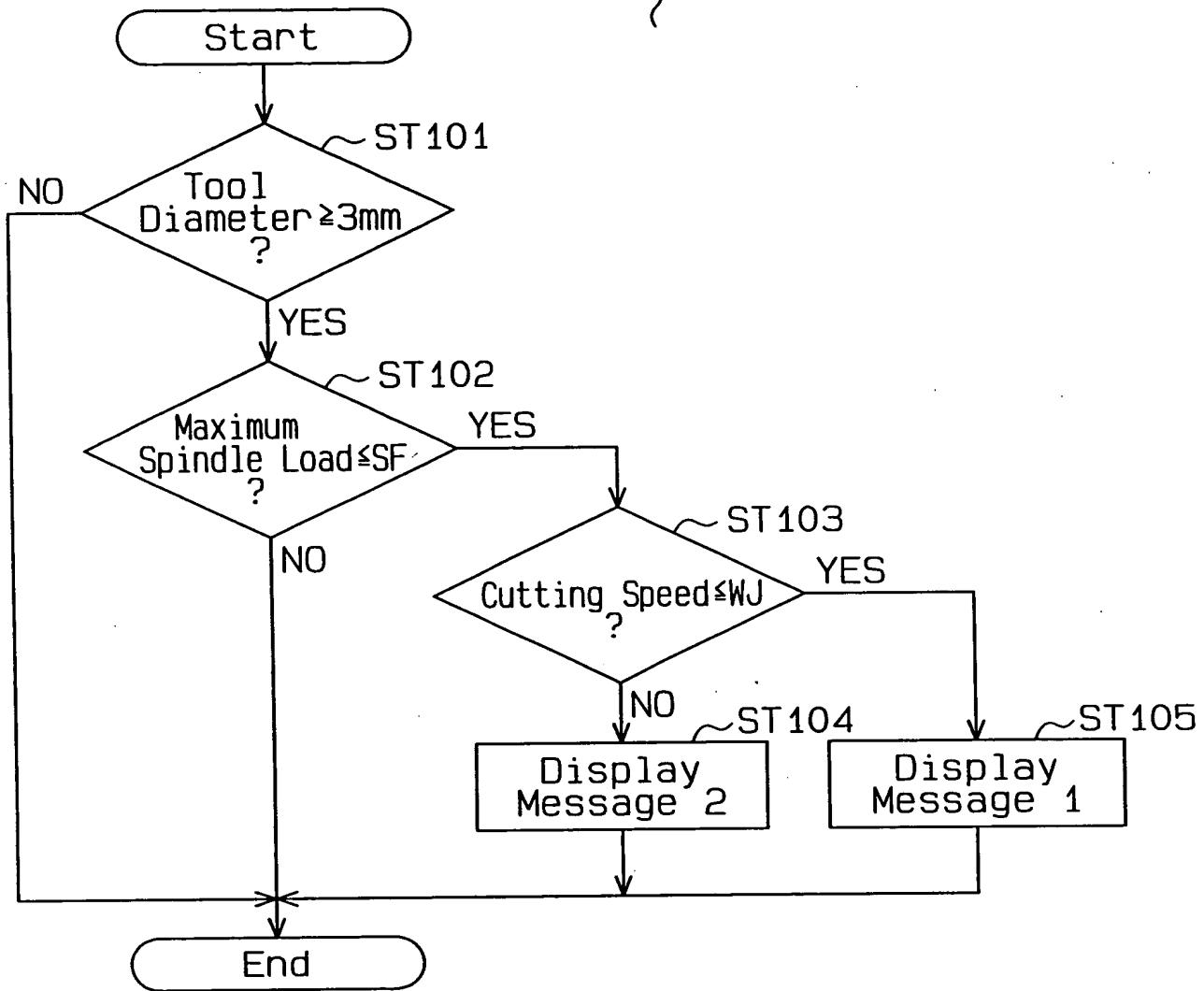


Fig.5

SR62

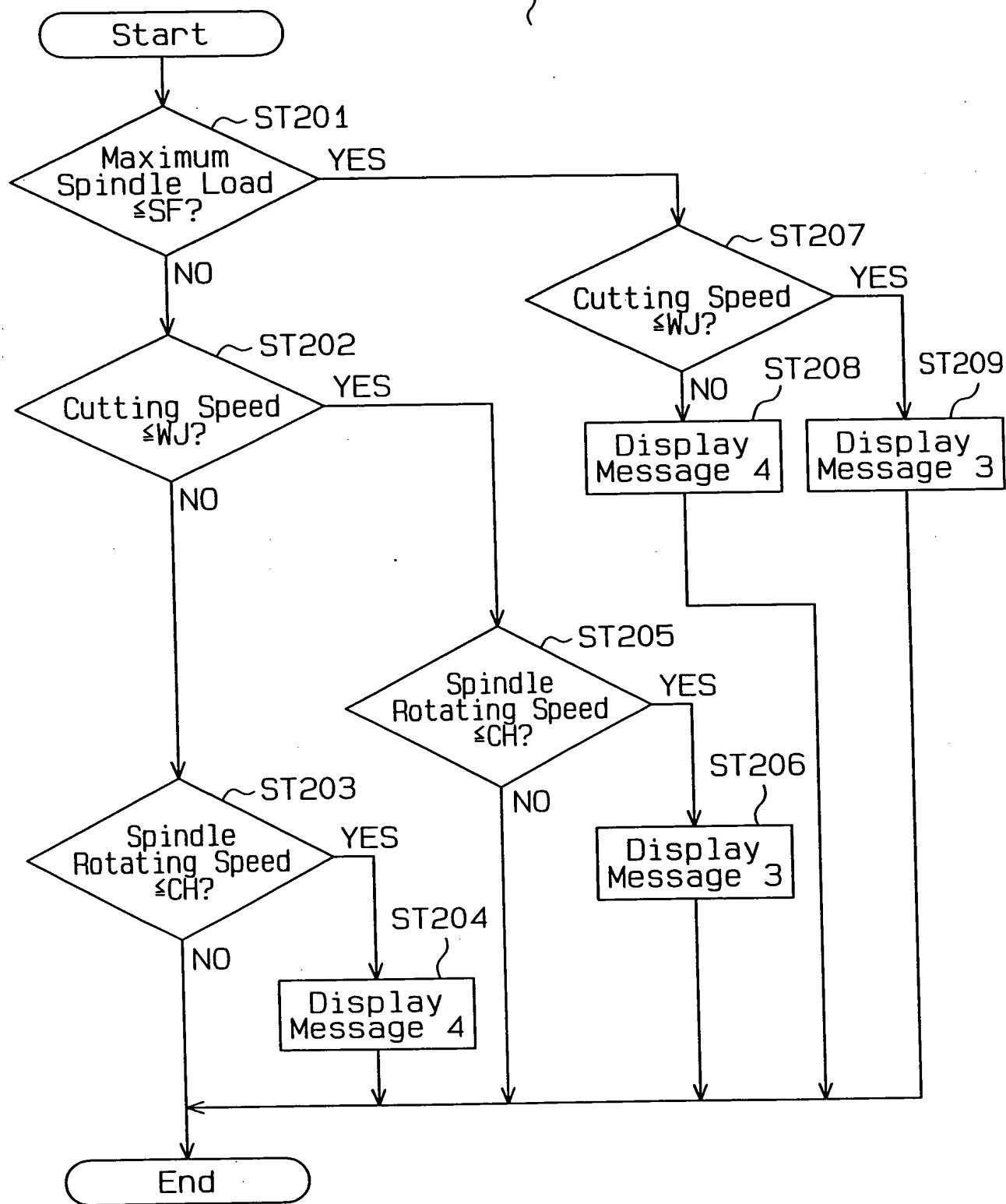


Fig. 6

SR63

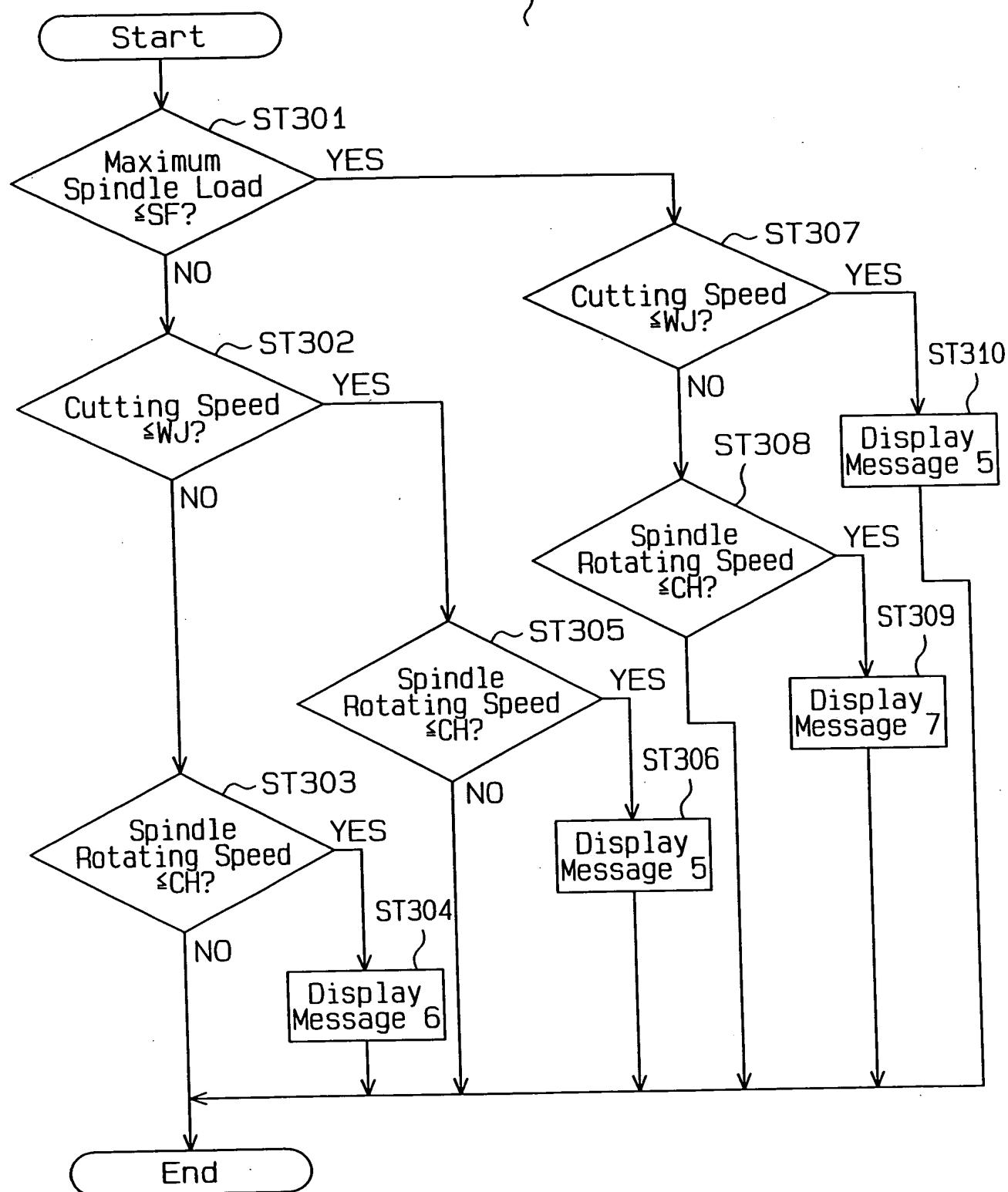
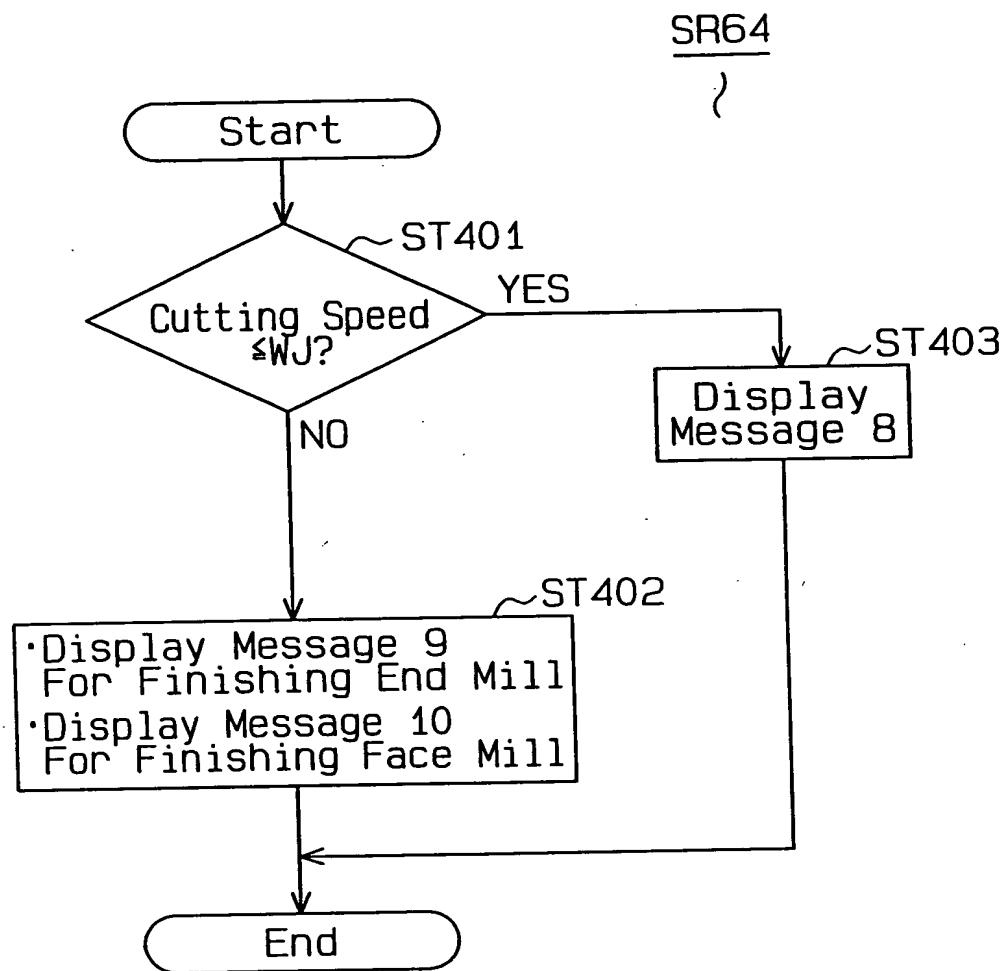


Fig. 7



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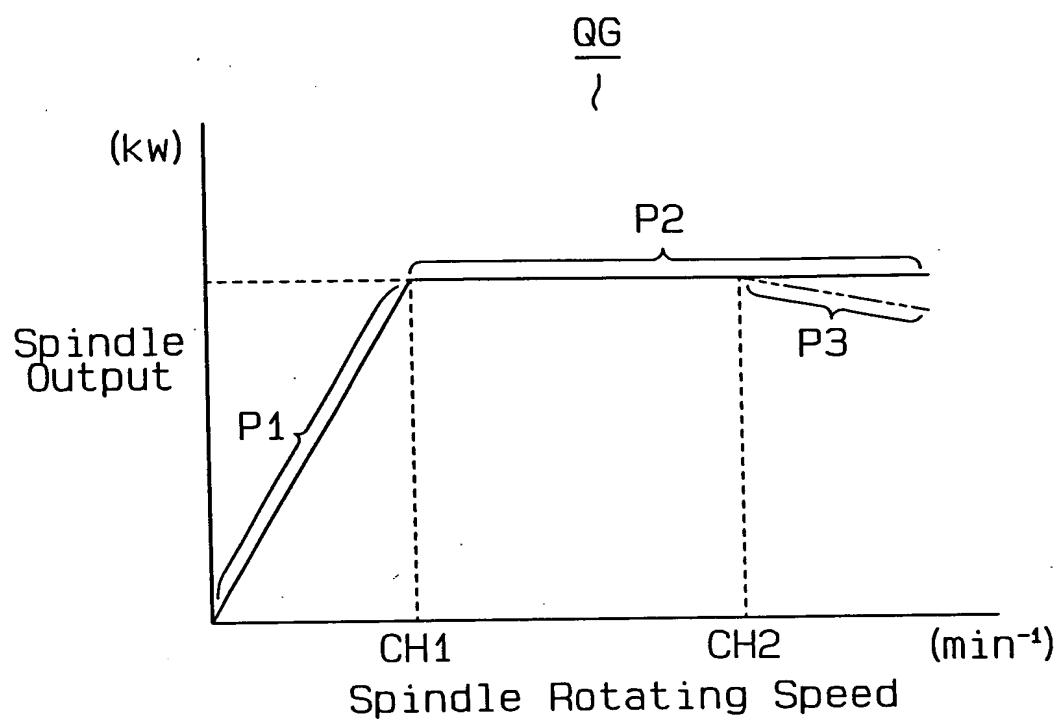
NJF

Fig.8

Navigation Information Number	Message (MSG)
1	<ul style="list-style-type: none"> • Increase cutting speed to limit value
2	<ul style="list-style-type: none"> • Change cutting tool material and increase cutting speed <ul style="list-style-type: none"> Change HSS tool (small diameter) to carbide tool Change HSS tool (large diameter) to throw away tool Change carbide tool to coolant through tool (for spindle through machines) Change carbide tool to carbide coating tool (for non-spindle through machines)
3	<ul style="list-style-type: none"> • Increase cutting speed to limit value <ul style="list-style-type: none"> (fix cutting speed if cutting speed is equal to) (or higher than maximum spindle rotating speed)
4	<ul style="list-style-type: none"> • Change cutting tool material and increase cutting speed <ul style="list-style-type: none"> Change HSS tool (small diameter) to carbide tool Change HSS tool (large diameter) to throw away tool
5	<ul style="list-style-type: none"> • Increase cutting speed to limit value <ul style="list-style-type: none"> (fix cutting speed if cutting speed is equal to) (or higher than maximum spindle rotating speed)
6	<ul style="list-style-type: none"> • Change cutting tool material and increase cutting speed <ul style="list-style-type: none"> Change carbide tool to carbide coating tool (except when the workpiece material is AL)
7	<ul style="list-style-type: none"> • Decrease tool diameter and increase rotating speed
8	<ul style="list-style-type: none"> • Increase cutting speed to limit value <ul style="list-style-type: none"> (fix cutting speed if cutting speed is equal to) (or higher than maximum spindle rotating speed)
9	<ul style="list-style-type: none"> • Change to tool with a larger teeth number and increase feed rate • Change cutting tool material and increase cutting speed <ul style="list-style-type: none"> Change HSS tool to carbide tool Change carbide tool to carbide coating tool (except when the workpiece material is AL)
10	<ul style="list-style-type: none"> • Change to tool with a larger teeth number and increase feed rate • Change cutting tool material and increase cutting speed <ul style="list-style-type: none"> (except when workpiece material is AL) • Change carbide tool to carbide coating tool or cermet tool • Change carbide coating tool to cermet tool

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Fig.12



APPROVED	C.
BY	
DRAFTSMAN	CLASS 10 CLASS

Fig.9(a) SYF1

Workpiece Material	Basic Cutting Speed
FC	30
FCD	25
S45C	30
SCM	25
SUS	15
AL	75
CU	75
:	:

Fig.9(b) SKF1

Workpiece Material	Compensation Coefficient
HSS	100
Carbide	220
HSS Coating	150
Coolant Through	460
Throw Away	560
Brazed	240
:	:
:	:

Fig.10(a) SYF2

Workpiece Material	Basic Cutting Speed
FC	120
FCD	110
S45C	100
SCM	90
SUS	85
AL	700
CU	230
:	:

Fig.10(b) SKF2

Workpiece Material	Compensation Coefficient
HSS	25
Carbide	100
HSS Coating	30
Carbide Coating	110
Roughing	40
Throw Away	150
:	:
:	:

Fig.11(a) SYF3

Workpiece Material	Basic Cutting Speed
FC	140
FCD	125
S45C	200
SCM	140
SUS	200
AL	1000
CU	300
:	:

Fig.11(b) SKF3

Workpiece Material	Compensation Coefficient
Carbide	100
Cermet	120
Carbide Coating	115
:	:
:	:
:	:
:	: